



Committee is assuming that the realization of capital gains and losses has returned to its historical relationship to growth in the U.S. economy and will remain there throughout the period. The equation uses fiscal year nominal Indiana Nonfarm Personal Income and is replicated as Equation (2) below.

Income taxes imposed by counties in Indiana are collected by the State and distributed back to the imposing counties. The collection and distribution mechanisms result in a material lag between the time local income taxes are collected and the time the State is able to segregate those taxes for distribution to the appropriate counties. As a result, local income taxes collected in the prior fiscal year are distributed from current income tax collections. The Committee found that for several probable reasons, the collection and distribution mechanisms in place will result in a material impact on current State income tax revenues reported during the forecast period. The results from Equation (2) were adjusted to account for this impact.

$$\text{Equation (2)} \quad \text{Individual Income Tax} = -106.426001 + 0.023393 (\text{FY\_NFIPI}) + \text{Adjs.}$$

#### Corporate Income Tax

The corporate income tax has historically been the most difficult for the Committee to forecast. The Committee elected to retain the equation it used in April 2005 and to account separately for the effects of *Azta Indiana Gaming Corporation vs. the Indiana Department of State Revenue* and its increased experience with the Utilities Receipts Tax. The equation employed by the Committee is replicated as equation (3) below.

$$\text{Equation (3)} \quad \text{Corporate Adjusted Gross Income} = 3,448.479916 + 0.689530494(\text{CY\_RGDP}) - 25,533.93737 (\text{Rate Differential}) - 2,827.980325 (\text{D1}) + \text{Utility Receipts Tax} + \text{Adj.}$$

Where D1 = 1 if year > 2001

#### Cigarette & Tobacco Products Tax

The Committee adopted two equations to estimate the Cigarette Tax and Tobacco Products Tax. Cigarette Sales, measured in packs of 20, depend upon fiscal year real Indiana Nonfarm Personal Income (RFY\_NFIPI), and estimate of the sum of the four surrounding states real prices (RALLPRICE), the real Indiana price (RINPRICE), a dummy variable for 1985 and years after (D85), a variable which takes the real Indiana price multiplied by D85 (PRICED85), the real cigarette excise tax rate (CIGRATE) and a trend variable equal to the fiscal year forecasted minus 1965 (TREND). Tobacco Product sales are estimated based on fiscal year real Indiana Nonfarm Personal Income (RFY\_NFIPI), a price index for tobacco products (PRICE), and the excise tax on tobacco products (TOBRATE). The sales, income, price, and tobacco product excise tax variables are expressed in natural logarithms.

$$\text{Equation (4)} \quad \text{Cigarette Sales} = 1.589 + 0.685 (\text{RFY\_NFIPI}) + 0.013 (\text{RALLPRICE}) - 0.648 (\text{RINPRICE}) - 1.890 (\text{D85}) + 0.382 (\text{PRICE } 85) - 0.146 (\text{CIGRATE}) - 0.011 (\text{TREND})$$

$$\text{Equation 4(a)} \quad \text{Cigarette Tax} = 0.555 (\text{Cigarette Sales})$$



Equation (9) 
$$\begin{aligned} (\text{Total Wagering Receipts})^2 = & -484,691,705,119.43 + \\ & (3,095.36 * Q\_NFIPI) + (34,629.58 * Q\_TURNSTILE) + \\ & (23,710,442,850.10 * DIN) + (30,150,338,028.86 * DQ1\_02) + \\ & (19,261,535,909.57 * DQ1\_04). \end{aligned}$$

Where Q\_TURNSTILE is the actual quarterly turnstile count through the 3<sup>rd</sup> Quarter of 2005 and thereafter is equal to 6,571,860 in the 1<sup>st</sup> calendar quarter; 6,788,488 in the 2<sup>nd</sup> calendar quarter; 6,978,525 in the 3<sup>rd</sup> calendar quarter; or 6,398,526 in the 4<sup>th</sup> calendar quarter.

Where DIN = 1 if calendar quarter = 3rd Quarter 2002 or after.

Where DQ1\_02 = 1 if calendar quarter = 1st Quarter 2002.

Where DQ1\_04 = 1 if calendar quarter = 1st Quarter 2004.

### SPECIFIC METHODOLOGY (December 14, 2005)

#### GENERAL FUND

##### **Sales Tax:**

For Each Fiscal Year to be Forecasted

1. Multiply 0.021124 times fiscal year Indiana Nonfarm Personal Income.
2. Add 161.355287 to the results of Step 1.
3. Divide the results of Step 2 by 0.05 and multiply the results by 0.06 to account for the sales tax rate increase effective December 1, 2002 under HEA 1001-2002ss.
4. Subtract 59.7 in FY 2006 and 60.2 in FY 2007 from the result of step 3 to account for the response of consumer to the retail sales tax rate increase under HEA 1001-2002ss and tax measures enacted in 2005.
5. Multiply the results of Step 4 by 0.49192 to account for the percentage of sales taxes deposited in the General Fund under HEA 1001-2002ss.

##### **Individual Income Tax:**

For Each Fiscal Year to be Forecasted

1. Multiply 0.023393 times fiscal year Indiana Nonfarm Personal Income.
2. Subtract 106.426001 from the results of Step 1.
3. Subtract 237.6 for FY 2006, and 247.0 for FY 2007 from the results of Step 2 to account for tax measures enacted in 1997, 1999, 2002, and 2005.

4. Subtract 138.0 for FY 2006, and 92.0 for FY 2007 from the results of Step 3 to account for the impacts of local income tax distributions as explained in the section of this document describing the individual income tax equation.
5. Multiply the results of Step 4 by 0.86 to account for the percentage of individual income tax deposited in the General Fund under HEA 1001-2002ss.

### **Corporate Income Tax:**

For Each Fiscal Year to be Forecasted

1. Multiply 0.6895305 times calendar year U.S. Real Gross Domestic Product.
2. Add 3,448.479916 to the results of Step 1.
3. Multiply -25,533.93737 times 0.051 and add the result to the results of Step 2 to account for the impact of a differential between the corporate income tax rate and the individual income tax rate.
4. Subtract 2,827.980325 from the results of Step 3.
5. Multiply the results of Step 4 by the statutory corporate income tax rate of 0.085.
6. Subtract 51.5 from the results of Step 5 to account for the impact of changes to the Research and Development Expense Credit contained in HEA 1001-2002ss.
7. Add 170.5 to the results of Step 6 to account for the revenues from the Utility Receipts Tax.
8. Add 20.0 to the results of Step 7 to account for General Fund revenues from the Financial Institutions Tax.
9. Add 4.1 for FY 2006 and 13.0 for FY 2007 to account for tax measures enacted in 2005.
10. Add 40.6 for FY 2006 to the result of step 9 to account for the one-time impact of *Azta Indiana Gaming Corporation vs. the Indiana Department of State Revenue*.
11. Add 31.5 for FY 2006 and 32.7 for FY2007 to the results of Step 10 to account for the ongoing impact of *Azta Indiana Gaming Corporation vs. the Indiana Department of State Revenue*.

### **Cigarette Tax:**

For Each Fiscal Year to be Forecasted

1. Multiply 0.685 by the logarithm of fiscal year real Nonfarm Indiana Personal Income.
2. Add 1.589 to the result of step 1.

3. Multiply 0.013 by the logarithm of the sum of the real cigarette prices in the four surrounding states.
4. Add the result of step 3 to the result of step 2.
5. Multiply -0.648 by the logarithm of the real cigarette price in Indiana.
6. Add the result of step 5 to the result of step 4.
7. Subtract -1.890 from the result of step 6 for years after 1985.
8. Multiply 0.382 by the logarithm of real Indiana prices for years after 1985.
9. Add the result of step 8 to the result of step 9.
10. Multiply -0.146 by the logarithm of the real cigarette excise tax rate.
11. Add the result of step 10 to the result of step 9.
12. Subtract 1965 from the fiscal year forecasted.
13. Multiply the result of step 12 by -0.011.
14. Add the result of step 13 to the result of step 11.
15. Take the exponential of step 14, to get sales.
16. Multiply the result of step 15 by 0.555 to get total revenue.
17. Multiply the result of step 16 by 0.8397 to get General Fund revenue.

**Tobacco Products Tax:**

1. Multiply 1.053 by the logarithm of fiscal year real Nonfarm Indiana Personal Income.
2. Subtract -11.090 from the result of step 1.
3. Multiply 0.678 by the logarithm of the of the real tobacco product price.
4. Add the result of step 3 to the result of step 2.
5. Multiply 100 by the tobacco products excise tax rate.
6. Multiply -0.401 by the logarithm of the result of step 5.
7. Add the result of step 6 to the result of step 4.
8. Take the exponential of step 7, to get sales.

9. Multiply the result of step 8 by 0.8397 to get General Fund revenue.

### **Alcoholic Beverage Tax - Beer:**

For Each Fiscal Year to be Forecasted

1. Multiply 0.940 by the logarithm of beer sales, lagged one year.
2. Subtract 2.624 from the result of step 1.
3. Multiply 0.324 by the logarithm of fiscal year real Non-Farm Indiana Personal Income.
4. Add the result of step 3 to the result of step 2.
5. Multiply -0.143 by the logarithm of the real beer price.
6. Add the result of step 5 to the result of step 4.
7. Multiply -0.009 by a trend term.
8. Add the result of step 7 to the result of step 6.
9. Take the exponential of the result of step 8 to get sales.
10. Multiply the result of step 9 by 0.115, to get total revenue; multiply the result of step 9 by .04 to get General Fund revenue.

### **Alcoholic Beverage Tax - Liquor:**

For Each Fiscal Year to be Forecasted

1. Multiply 0.655 by the logarithm of liquor sales, lagged one year.
2. Subtract 0.795 to the result of step 1.
3. Multiply 0.456 by the logarithm of fiscal year real Non-Farm Indiana Personal Income.
4. Add the result of step 3 to the result of step 2.
5. Multiply -0.433 by the logarithm of the real liquor price.
6. Add the result of step 5 to the result of step 4.
7. Multiply -0.022 by a trend term.
8. Add the result of step 7 to the result of step 6.
9. Multiply -0.488 by a dummy for 1991.

10. Add the result of step 9 to the result of step 8.
11. Multiply 0.018 by the trend term multiplied by the dummy for 1991.
12. Add the result of step 11 to the result of step 10.
13. Take the exponential of the result of step 12 to get sales.
14. Multiply the result of step 13 by 2.68, to get total revenue; multiply the result of step 13 by 1.00 to get General Fund revenue.

**Alcoholic Beverage Tax - Wine:**

For Each Fiscal Year to be Forecasted

1. Multiply 0.836 by the logarithm of wine sales, lagged one year.
2. Subtract 0.555 from the result of step 1.
3. Multiply 0.214 by the logarithm of fiscal year real Non-Farm Indiana Personal Income.
4. Add the result of step 3 to the result of step 2.
5. Multiply -0.313 by the logarithm of the real wine price.
6. Add the result of step 5 to the result of step 4.
7. Multiply -0.009 by the dummy for 1987 multiplied by the logarithm fiscal year Non-Farm Indiana Personal Income.
8. Add the result of step 7 to the result of step 6.
9. Take the exponential of the result of step 8 to get sales.
10. Multiply the result of step 9 by 0.47, to get total revenue; multiply the result of step 9 by 0.20 to get General Fund revenue.

**PROPERTY TAX REPLACEMENT FUND**

**Sales Tax:**

For Each Fiscal Year to be Forecasted

1. Multiply the results of Step 4 of the General Fund Sales Tax calculation by 0.5 to account for the percentage of sales tax deposited in the Property Tax Replacement Fund under HEA 1001-2002ss.

## **Individual Income Tax:**

For Each Fiscal Year to be Forecasted

1. Multiply the results of Step 4 of the General Fund Individual Income Tax calculation by 0.14 to account for the percentage of sales tax deposited in the Property Tax Replacement Fund under HEA 1001-2002ss.

## **Riverboat Wagering Tax:**

For Each Fiscal Year to be Forecasted

1. Multiply 3,095.36 by quarterly nominal Indiana Nonfarm Personal Income in thousands.
2. Subtract 484,691,705,119.43 from the result of Step 1.
3. Multiply 34,629.58 by the appropriate quarterly turnstile count and add the result to the results of Step 2.
4. Add 23,710,442,850.10 to the result of Step 3 for the 3rd Quarter of 2002 and each calendar quarter thereafter.
5. Take the square root of the result of Step 4 to obtain quarterly total wagering receipts.
6. Sum the quarterly totals from Step 5 for the fiscal year to obtain fiscal year total wagering receipts.
7. Distribute fiscal year total wagering receipts from Step 6 among the 10 riverboat casinos based on the actual FY 2005 percentage distribution of wagering receipts among the 10 riverboat casinos.
8. Use the fiscal year wagering receipts distributed to each riverboat casino from Step 7 to compute the fiscal year wagering tax for each riverboat casino.
9. Sum the fiscal year wagering tax totals for each riverboat casino from Step 8 to obtain fiscal year total wagering tax collections.
10. Subtract from the Step 9 result, 2,346,776 each year to account for reimbursement to the Indiana Gaming Commission for administrative expenses; 33,000,000 each year to account for local revenue sharing; and 95,046,641 each year to account for wagering tax distributions to riverboat communities.